The Missing H-Bomb—III

U.S. to Hunt Weapon Until Certain It Can't Be Found—by Friend or Foe

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Third of a series

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Concern over atomic health hazards is no longer the key factor in America's prodigious search for its missing, unarmed hydrogen bomb near Palomares on Spain's southeastern coast.

Now the primary aim is national security. This is why the hunt will be pressed for the missing weapon or pieces of the weapon and other, missing equipment. Not until Washington officials are obsolutely certain that the supersecret parts cannot be found by anyone else—friend or foe—will the search end.

The sinister spy thriller plots of SMERSH, SPECTRE and THRUSH may not be for real. But the concern of many American officials that wrong hands may pick up the atomic pieces near Palomares is real.

To date, there is no evidence that sabotage was a factor in the midair collision of a B-52 bomber and a KC-135 tanker on Jan. 17.

Nor, to date, is there any evidence that the missing bomb or other devices have

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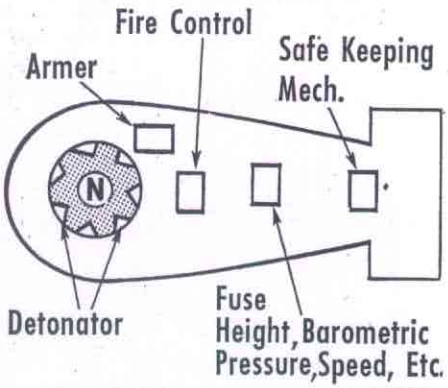

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MAKE-UP—This is a simplified, schemantic drawing of an atomic bomb's key components. The "N" is the nuclear material of atomic triggers surrounded by a high explosive. Height, barometric pressure and speed refer to some of the factors an armed bomb must sense before it will detonate.

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U.S. Must Make Sure Bomb Isn't Found by Friend or Foe

been recovered by "others" and surreptitiously spirited out of Spain.

If any key piece of the bomb turned up elsewhere it would be readily identifiable. Every important part of every American nuclear weapon — and there are tens of thousands of them—bears its own serial number.

Nevertheless, as long as there is the possibility, however remote, that the bomb or pieces of it might fall into the hands of another country, officials here will worry.

The reasons for worry are many. They vary by degree, depending on the country involved and the condition of bomb itself.

Even if the bomb were intact, it could not be use immediately. Most American nuclear weapons now are equipped with elaborate mechanical and electronic gadgets to prevent their unauthorized use. These devices are to prevent madmen—our own or those of our allies—from seizing and setting off an atomic weapon.

The reason why the bombs such as those aboard the ill-fated B52 could not be used immediately by unauthorized finders is that before they can be armed two or more persons must receive proper codes, called permissive action links (PAL), to unlock the protective devices. Only then can the sequence of events begin that will end in an atomic explosion.

Jumping such PAL devices would not be hard for a sophisticated nuclear power like Russia, which may or may not use a similar fail-safe system. Even experts from lesser nuclear know-how powers like France, Israel or West Germany, could eventually arm such a bomb. But even in these cases, extreme care would have to be taken by the finder not to set off the high explosive part of the bomb, especially if the bomb were damaged.

Nuclear weapons can be booby-trapped so that someone prying them open would set off the high explosive or even an atomic detonation. But they are not. The reason is that this would jeopardize American maintenance men who, from time to time, have to take nuclear weapons apart.

Such booby-traps also might be an Achilles heel in time of war if an enemy threatened to capture an American atomic weapon. Apparently, in this event, guards have orders to destroy the weapon by burning.

If there is time, this means prying open the devices and setting the high explosive afire. If there isn't time, the devices can be doused with flammable material and set afire.

Any doubt that fire will make an unarmed atomic weapon inoperable was dispelled some years ago when an atomic bomb-carrying American plane burned on the runway in Morocco. There was no atomic accident.

Want Bomb for Study

Given all this, it is unlikely that nuclear sophisticated nations like Russia, France or Israel would want to use a single unarmed American hydrogen bomb, such as that missing in Spain. Rather, they would want to study it.

As one qualified American official put it: "I would love to get my hands on a Russian weapon. Or a French one, for that matter."

What would most interest the Russians about an American hydrogen bomb, according to experts, is its design, especially the bomb's intricate electronic arming, fusing, and firing devices.

Weapons design still is one of America's most-closely held secrets. It is one of the few subjects excluded from cooperative military atomic agreements between the United States and its NATO Allies.

Though many U.S. atomic

weapons experts believe that there is not much the Russians do not already know about American atomic arms, some Government officials are not as complacent. Their anxiety amounts to this:

Careful, expert study of how America arms, fuses and fires its weapons might help the Russians devise electronic counter-measures that conceivably could turn American bombs dropped in anger into duds.

It is for this reason, too, that search parties in Spain want to reclaim, if possible, the lost bomb's armer, radar fuse and firing mechanism.

French Far Behind

Where H-bomb technology itself is involved, French nuclear experts would undoubtedly benefit far more than the Russians by getting an American bomb. A bomb such as that now lost represents 23 years of U.S. bomb-making. France set off its first atomic device just six years ago, and has yet to detonate an H-bomb.

There is little doubt, therefore, that an American hydrogen bomb would enhance France's atomic ambitions, as it would the "Nth" countries — those nations deemed scientifically and technically capable of producing nuclear weapons if they elect to.

The situation is far different for those countries that lack the scientific and technical atomic wherewithal. One expert suggested that because the technicans in these countries would be relatively unskilled, they would have to handle an intact nuclear weapon "like porcupines making love—very tenderly."

Here, the worry over the use of an intact bomb is more acute. In time, high explosive experts in any number of such countries could figure out a way to arm the bomb. Then, there would be no sure safeguard against the bomb's use by an angered or deranged head of state.

Tempting Contents

Even if an intact bomb were not armed for use on blackmail, its plutonium would represent tempting amounts of the stuff of atomic bombs which many non-nuclear countries do not have or cannot afford.

An appreciable chunk of plutonium would give this advantage to another nation, which could melt the man-made chemical down and refashion it into the guts of a small atomic bomb.

Chunks of the exceedingly dense and heavy chemical, which looks like steel, often spill from a cracked atomic bomb casing in accidents such as Palomares.

All told, the United States has admitted 14 nuclear weapons accidents. They range from a freight train derailment near Marietta, Ga., on Dec. 3, 1962, involving two special weapons-carrying cars, to the crash of a B-52 carrying two unarmed nuclear weapons near Cumberland, Md., on Jan. 13, 1964.

There is reason to believe there have been more incidents than this involving American nuclear weapons. There also is reason to believe that not all the atomic pieces have been fully recovered.

NEXT: How badly has America been hurt?